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For: HEALTH CARE SYSTEM AND MANAGEMENT METHOD THEREOF

VERIFICATION OF TRANSLATION

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(Translation)

APPLICATION FOR PATENT

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TITLE OF INVENTION: HEALTH MANAGEMENT SYSTEM AND METHOD

Submitted herewith is/are an application identified above pursuant to Article 42 of the Patent Act.

This 16th day of September, 1999

Patent Attorneys: Won-Ho KIM

To the Commissioner of
the Korean Intellectual Property Office

Attachment: 1. Abstract, specification(and drawing)-one copy each
2. Floppy Disk(which includes the application form, abstract, specification(and drawing))
3. Power of Attorney

[ABSTRACT OF THE DISCLOSURE]

[ABSTRACT]

A health management system includes a health management device having an input part for inputting basic data, a control part for analyzing the basic data and assessing desired body data on the basis of the basic data, a memory for storing the basic data, and software and data required for the process to be performed by the control part, an output part for outputting a result of the process performed by the control part, a data conversion device, a data transmitting and receiving device, a network for transmitting data output from the health management device and a database server for storing, analyzing and assessing the data transmitted via the network from the health management device. Further, the database server transmits a prescription of a professional doctor who inspects the data analysis and assessment to the health management device via the network. If a user inputs his body data and food intake or activity contents in the health management device, the health management device analyzes and assesses the input items and provides prescriptions for the current body data, desired body data and health management data directly to the user or via the database server together with the prescription of the doctor, thereby achieving effective body weight control and health management.

[REPRESENTATIVE DRAWING]

Fig. 3

[INDEX]

body mass index, waist / hip circumference ratio, body weight

[SPECIFICATION]

[TITLE OF THE INVENTION]

HEALTH MANAGEMENT SYSTEM AND METHOD

[BRIEF DESCRIPTION OF THE DRAWINGS]

5 Fig. 1 is a block diagram of a health management device according to the present invention.

 Fig. 2 is a flow chart for explaining a health management method according to the present invention.

 Fig. 3 is a flow chart for explaining a health management system
10 according to a first embodiment of the present invention.

 Fig. 4 is a flow chart for explaining a health management method of the health management system according to the first embodiment of the present invention.

 Fig. 5 is a block diagram showing a health management system
15 according to a second embodiment of the present invention.

 Fig. 6 is a flow chart showing a health management method of the health management system according to the second embodiment of the present invention.

20 **[DETAILED DESCRIPTION OF THE INVENTION]**

[OBJECT OF THE INVENTION]

[FIELD OF THE INVENTION AND PRIOR ARTS OF THE FIELD]

 The present invention relates to a health management system and a health management method for a user to effectively control his body weight

without the insufficiency or excessiveness of the calories and nutrients via a professional doctor's prescription using a health managing apparatus including a data transmitting and receiving device.

In response to the lifestyle changes and complications of society,
5 various diseases of adult people have been induced and interest in health issues has increased. In particular, interest in people's body weight has become connected to beauty and adult diseases, and various products have been developed to deal with this.

However, most related art health management devices simply compute
10 and inform a user of obesity, a normal body weight, an encouraged caloric intake per day for an ideal body weight, or calories consumed in a day, or inform the user of a result determined by deducting his caloric consumption from his caloric intake.

Therefore, the related art health management devices have problems in
15 that it is impossible to provide information on the way to reach a desired body weight, or consider a personal clinical history or dietary habits.

Further, the related art health management devices have a disadvantage in that it is difficult to effectively control a body weight because the encouraged caloric consumption per day with relation to an encouraged caloric
20 intake per day and a predictive total caloric consumption of the day are not suggested.

Furthermore, the related art health management devices have the disadvantage in that it is impossible to receive a professional doctor's advice required for body weight control as frequently as desired.

[PROBLEMS TO BE SOLVED OF THE INVENTION]

The present invention obviates the problems due to the prior arts. A professional doctor analyzes personal data such as personal clinic history and dietary habits, caloric intake and caloric consumption, and body data of a user
5 and suggests a predictive total caloric consumption of a day and a prescription for encouraged caloric intake and consumption per day as well as content of activity for the caloric consumption. A health management device includes a data transmission and receiving element, so that the user can input his food intake and activity contents and receive prescriptions of the doctor at any time.

10 Accordingly, It is to provide a health management system and a health management method which have medical professionalism, mobility and convenience so that adult diseases due to the lack of nutrients or worse caused by inappropriate dietary habits for body weight control, overeating of food and lack of exercise may be prevented and beauty may be promoted by controlling
15 body weight and managing health effectively.

[STRUCTURES OF THE INVENTION]

In order to achieve the above objectives, a health management system and a health management method according to the present invention may provide a professional doctor's prescription for body weight management of the
20 user according to the personal data input by the user such as body data, clinical history, dietary habits, activity degree, caloric intake and activity contents.

According to one aspect of the present invention, a health management device includes an input part, a control part, a memory and an output part.

The input part is to input basic data of a user.

The control part computes an ideal body weight, a body mass index and a waist / hip circumference ratio on the basis of the basic data for suggesting a prescription by computing an encouraged caloric intake per day, distribution of respective nutrients and an encouraged calorie consumption per day, and suggests the prescription of the amount among food and time of activities on the remaining intake calories and respective nutrients and consumption calories by analyzing the calories and respective nutrients already taken in and consumed by the user by a predetermined time point in a day when a user inputs desired food or activity contents.

The memory stores the input content of the input part and stores software and data required for the processing of the control part.

The output part outputs a result processed by the control part and the basic data.

According to another aspect of the present invention, in a health management device including an input part for inputting basic data, a control part for suggesting a prescription on the basis of the basic data, a memory for storing the basic data and software and data required for the process to be performed by the control part, and an output part for outputting a result of the process performed by the control part, a health management method includes the steps of inputting basic data, selecting functions, computing a total caloric consumption in a day, computing a total caloric intake in a day, outputting a current body weight status, recognizing a desired body weight, and estimating a body weight after a predetermined period or a period to reach the desired body weight.

The step of inputting basic data is carried out by storing the basic data input in the input part by a user.

The step of selecting functions is carried out by selecting a function to be used by the user from all functions provided and performed by the health management device.

The step of computing total caloric consumption in a day is carried out by performing a function for computing total consumed calories by activity in a day and remaining encouraged caloric consumption on the basis of the basic data.

The step of computing total caloric intake in a day is carried out by computing total calories taken in a day, remaining encouraged caloric intake and predictive total caloric consumption in a day on the basis of the basic data.

The step of outputting a current body weight status is carried out by outputting a current body weight status on the basis of the basic data in the function selected by the user.

The step of recognizing a desired body weight is carried out for suggesting a prescription for a procedure to reach the desired body weight.

The step of estimating a body weight change is a step for performing a function for estimating a controllable body weight from the present to a desired period or a period to reach a desired body weight according to whether the user selects and inputs the desired period or the desired body weight on the basis of the caloric intake per day and the caloric consumption per day from a predetermined time point in the past to the present.

In a health management device including an input part for inputting

basic data, a control part for analyzing the basic data and assessing a desired body data on the basis of the basic data, a memory for storing the basic data and software and data required for the process to be performed by the control part, an output part for outputting a result of the process performed by the control part, a data conversion device and a data transmitting and receiving device, a health management system includes a network and a database server.

The network is to transmit data output from the health management device.

The database server is to store the data transmitted via the network for transmitting a prescription of a doctor on the basis of the transmitted data to the health management device via the network.

Wherein, the database server has functions for analyzing the basic data, assessing a desired body data on the basis of the basic data, and transmitting a prescription of a doctor to the health management device.

A health management method according to a first embodiment of the present invention includes the steps of connecting the database server to the health management device via a network, storing analysis data of the basic data and assessment data of the desired body data transmitted from a health management device, and transmitting prescription data of a doctor who inspects the analysis of the basic data and the assessment of the desired body data of the database server by the network.

According to the first embodiment of the present invention, in a health management device including an input part, a control part, a memory, an output

part, a data conversion device and a data transmitting and receiving device, and having functions to transmit basic data and desired body data of a user and to output a prescription of a doctor who receives the basic data and the desired body data, a health management method includes the steps of connecting the database server to the health management device via a network, storing analysis data of the basic data and assessment data of the desired body data transmitted by the health management device in the database server, and transmitting a prescription of a doctor who inspects the analysis data of the basic data and the assessment data of the desired body data to the health management device via the network.

In a health management device including an input part for inputting basic data, a control part for analyzing the basic data and assessing the desired body data, a memory for storing the basic data and software and data required for the process to be performed by the control part, and an output part for outputting a result of the process performed by the control part, a data conversion data and a wireless transmitting and receiving device, a health management system according to a second embodiment of the present invention includes a base station, a base station controller, a network switch and a database server.

The base station is wirelessly connected to the health management device by using multi-connection communications techniques and protocol to wirelessly connect the health management device to a database server.

The base station controller manages communications frequencies between the health management device and the base station for monitoring and

controlling the base station.

The database server stores information on the installation, management and repair, and connection attestation in the wireless communications connection with the health management device, and transmits prescription data of a doctor to the health management device according to the basic data of a user by being connected to the health management device via the base station.

The network switch connects the base station controller to the database server.

The database server may also analyze the basic data of the user and assess the desired body data on the basis of the basic data instead of the health management device.

In a health management device including an input part, a control part, a memory, an output part, a data conversion device and a data transmitting and receiving device, and having functions to transmit basic data and desired body data of a user and to output a prescription of a doctor who receives the basic data and the desired body data, a health management method according to a second embodiment of the present invention includes the steps of wirelessly connecting a base station to the health management device by using multi-connection communications techniques and protocol, storing analysis and assessment of the basic data and the desired body data in a database server, and transmitting prescription data of the database server that is the inspected analysis and assessment of the basic data and the desired body data, to the health management device via the database server, a network switch, a base station controller and the base station.

Wherein, in the health management device including an input part, a control part, a memory, an output part, a data conversion device and a data transmitting and receiving device, and having functions to transmit basic data and desired body data of a user and to output a prescription of a doctor who receives the basic data and the desired body data, the health management method according to the second embodiment of the present invention may include the steps of wirelessly connecting a base station to the health management device by using multi-connection communications techniques and protocol, storing the analysis and assessment of the basic data and the desired body data in the database server, storing analysis and assessment results of the basic data and the desired body data performed by the database server in the database server, and transmitting prescription data of a doctor who inspects the analysis and assessment results stored in the database server to the health management device via the database server, a network switch, a base station controller and the base station.

The present invention will be described in detail with reference to the accompanying drawings.

Fig. 1 is a block diagram showing a health management device 100 according to the present invention.

Referring to Fig. 1, a health management device 100 according to the present invention includes an input part 110, a control part 120, a memory part 130 and an output part 140.

The input part 110 is to input personal data of a user, body data, current clinical history and habits, the kind and amount of food taken by the user, and

activity contents. The personal data of the user refer to the date of birth and the distinction of sex(including the pregnancy and feeding on females). The body data refer to height, body weight, waist size, hip size and activity degree regarded as factors for computing an encouraged caloric intake per day according to the routine activity of the user.

The control part 120 provides a caloric intake per day, distribution of nutrients, and an encouraged caloric intake per day, computes an ideal body weight, a body mass index and a waist / hip circumference ratio on the basis of past and present body data and a desired body data, analyzes a transition of body data of the user, and computes encouraged caloric intake and consumption per day according to the activity of the user. A prescription for the health of the user on the basis of the above includes the amount and kind of food, and time and content of activity for controlling excessive or insufficient calorie amounts.

The memory part 130 stores the input content of the input part 110, and software and data required for the process to be performed by the control part 120.

The output part 140 outputs contents input by the user, and a result of the process performed by the control part 120 visually and aurally.

Fig. 2 is a flow chart showing a health management method according to the present invention.

As shown in Fig. 2, a health management method according to the present invention includes the steps of inputting basic data S100, selecting functions S200, computing total calories taken in a day S300, computing total

calories consumed in a day S400, recognizing a current body weight S500, recognizing a desired body weight S600, and simulating a future body weight S700.

In step of inputting basic data S100, a user inputs personal data such as
5 the date of birth and the distinction of sex, the kind and amount of food taken by the user, activity contents per day, body data and current clinical history, pregnancy and nursing status, and dietary habits in the input part 110. The above data is stored in a memory part 130.

At this time, the body data indicates past and present body data such as
10 height, body weight, waist size, hip size and activity degree together with respective data measuring dates.

An amount of activity per day means content and hours of activities taken in a day by the user. In the present invention, the activity content is organized by eating, reading the newspaper, talking, driving a car, watching TV,
15 office work and sleeping. Other various activities may be added.

In step of selecting functions S200, the user selects a function to use out of various functions provided by the health management device 100.

In step of computing total calories taken in a day S300, total caloric intake of the user is computed on the basis of the basic data input in step S100,
20 wherein total calories and nutrients taken in a day are analyzed in step S305, and the total calories and nutrients taken in a day and a remaining encouraged caloric intake and nutrients for the day are output in step S310.

In step of analyzing total calories and nutrients taken in a day S305, if a signal for selecting a function for computing the total caloric intake per day is

received by the control part 120 by the selection of the user in step S200, the control part 120 computes the total calories and nutrients taken in a day on the basis of the calories and nutrients taken for a day input in step S100.

In step of computing total calories consumed in a day S400, total
5 calories consumed by activities of the user in a day are computed on the basis of the basic data input in step S100, wherein the total calories consumed in a day are analyzed in step S405 and the total calories consumed in a day, the remaining encouraged caloric consumption of the day, and a predictive total caloric consumption in a day are output in step S410.

10 In step of analyzing the total calories consumed in a day S405, when the control part 120 receives a signal for selecting a function for computing total caloric consumption in a day by the selection of the user in step S200, and the control part 120 computes the total calories consumed by the user in a day on the basis of the amount of activity undertaken by the user on the day which was
15 input in the basic data input step S100.

That is, as the user inputs the time of each activity in the activity contents, the control part 120 computes the caloric consumption according to each of the activities and hours of the activities in view of the current body weight by using a computation formula stored in the memory part 130.

20 In step of outputting a remaining encouraged caloric consumption of the day and a predictive total caloric consumption in a day 410, the control part 120 outputs the total caloric consumption and a predictive total caloric consumption in a day computed in step S405 by the output part 140 and the remaining encouraged caloric consumption of the user on the basis of the basic data input

in the basic data which was input in step S100 by the output part 140.

In step of recognizing a current body weight S500, a current body weight status on the basis of the basic data is output, wherein the basic data is analyzed in step S505 and a prescription for the current body weight is output in
5 step S510.

In step of analyzing the basic data S505, the basic data input in the basic data input step S100 is analyzed with relation to a desired body weight or a desired period according to whether the user inputs the desired body weight or a desired period in the selecting step. On the other hand, the basic data input
10 in the basic data input step S100 is analyzed with relation to the current body weight when the user does not input either the desired body weight or the desired period. The control part 120 compares and analyzes the desired body weight with the current body weight, or the current body weight with an ideal body weight, for assessing how much the desired body weight or the ideal body
15 weight is achieved.

In step of outputting a prescription for the current body weight S510 for outputting a prescription for the current body weight, the control part 120 determines a lower body weight, a normal body weight, an overweight and obesity by comparing the desired body weight with the current body weight, or
20 the current body weight with the ideal body weight. It also suggests the degree of the abdominal obesity and suggests a prescription per day according to the determination, wherein the control part 120 suggests an appropriate way to achieve body weight control according to the determination contents.

Step S600 of recognizing a desired body weight is carried out for

suggesting a prescription of the body weight control for the user to reach his desired body weight for a desired period and includes the steps of setting a desired body weight S605, assessing desired body data S610 and suggesting a prescription with relation to the assessment S615.

5 In step of setting a desired body weight S605, body data desired by the user is stored in the memory part 130 via the input part 110.

 In step of assessing desired body data S610, the desired body data input in step S605 is compared with the current basic body data input in step S100 for assessing a current status.

10 In step of suggesting a prescription with relation to the assessment S615, the control part 120 analyzes various factors such as current body weight, the degrees of obesity and abdominal obesity, personal clinical history, habits, etc. and suggests the way for controlling his body weight, that is, the appropriate speed of body weight control, caloric intake per day, increase or
15 decrease of calories, caloric consumption per day, encouragement or limitation of intake food, encouraged activity names, etc. by the output part 140.

 In the future body weight simulation step S700, a body weight of the user or a controllable body weight of the user after a predetermined period from the present, or a period to reach the desired body weight from the current body
20 weight is estimated on the basis of the caloric intake and consumption per day, or the body weight change from a predetermined time point in the past to the present. The future body weight simulation step S700 includes the steps of selecting either designation of a desired value (a desired period or a desired body weight) or not in step S710, selecting either an estimated period or an

estimated body weight in step S715, inputting an estimated period in step S720, inputting an estimated body weight in step S725, performing a first simulation in step S730, performing a second simulation in step S735, selecting either a desired period or a desired body weight in step S740, inputting a desired period
5 in step S745, inputting a desired body weight in step S750, performing a third simulation in step S755, and performing a fourth simulation in step S760.

The step S710 of selecting either designation of a desired value (a desired period or a desired body weight) or not is carried out for determining whether to set a basis for the estimation of the controllable body weight range of
10 the user in the future with a desired period or body weight, or dietary habits from the past to the present.

The step S715 of selecting either an estimation period or an estimation body weight is carried out for determining whether to set a basis for the estimation of the future body data with a period or a body weight.

15 The first simulation is performed in step S730 in response to the input of a period by the user in step S720 of inputting an estimated period, and the second simulation is performed in step S735 in response to the input of a body weight by the user in step S725 of inputting an estimated body weight.

The step S740 of selecting either a desired period or a desired body
20 weight is carried out for determining whether to set a basis of estimation of future body data with a desired period or a desired body weight.

The third simulation is performed in step S755 in response to the input of a desired period by the user in step S745 of inputting a desired period, and the fourth simulation is performed in step S760 in response to the input of a

desired body weight by the user in step S750 of inputting a desired body weight.

In the first simulation step S730, the control part 120 outputs an estimated body weight value on the basis of the caloric intake and consumption per day or the change of the body weight from a predetermined time point in the past to the present as the user inputs an estimated period in step S720.

In the second simulation step S735, the control part 120 outputs an estimated period on the basis of the caloric intake and consumption per day or the change of the body weight from a predetermined time point in the past to the present, as the user inputs an estimated body weight in step S725.

In the third simulation step S755, the control part outputs a controllable body weight from the present to a desired period, as the user inputs the desired period in step S745.

In the fourth simulation step S760, the control part outputs a period to reach a desired body weight in the present state, as the user inputs the desired body weight in step S750.

Fig. 3 shows a health management system according to the first embodiment of the present invention.

As shown in Fig. 3, a health management system according to the first embodiment of the present invention includes a health management device 100', a database server 300 and a network 310.

The health management device 100' includes the components of the health management device 100 as shown in Fig. 1, and performs the basic function thereof. The health management device 100' may be connected to a database server 300 by a data converting device (not shown) and a data

transmitting and receiving device (not shown).

The database server 300 stores data required for suggesting a prescription revised by a doctor of the user, and is connected to the health management device 100' by a network 310 for transmitting the prescription
5 which is suggested by the doctor appropriately for the characteristics of the user on the basis of the basic data of the user transmitted by the health management device 100' to the health management device 100' by the network 310.

If any new items are generated, the database server 300 transmits the new items to the health management device 100' for the update of the memory
10 content of the health management device 100'.

The network 310 connects the health management device 100' to the database server 300 and performs arbitration of the data transmission between the health management device 100' and the database server 300.

In here, the data transmitting and receiving device used in the health
15 management device 100' according to the first embodiment of the present invention may be the wireless or wire data transmitting and receiving device. In this case, the network allows to transmit and receive the data in wireless. For example, the health management device 100' may be the wireless terminal such as PDA, and the wireless network may be the satellite communication
20 network which can be connect the wireless terminal.

Fig. 4 is a flow chart for explaining a health management method according to the health management system of the first embodiment of the present invention.

As shown in Fig. 4, the health management method of the health

management system according to the first embodiment of the present invention includes the steps of connecting the network S805, storing in the database S810, suggesting a prescription of a doctor S815, and outputting a basic prescription and the prescription of the doctor to S820.

5 In the network connection step S805, the health management device 100' is connected to the database server 300 by the network 310.

 In the database storing step S810, the analysis data of the basic data and assessment data of the desired body data of the health management device 100' are stored not only in the memory of the health management device
10 100' but also in the database server 300 for the inspection of a doctor in charge of the user.

 In the prescription suggestion step S815, the doctor suggests a prescription appropriate for the characteristics of the user after inspecting the user's clinical history, dietary habits and degree to how much the user reaches
15 the desired body by reviewing the analysis data of the basic data and the assessment data of the desired body data of the health management device. As the suggested prescription of the doctor is stored in the database server 300, the database server 300 transmits the suggested prescription of the doctor to the health management device 100' by the network 310, so that the memory
20 content of the health management device 100' is updated.

 In the prescription output step S820, the health management device 100' having received the doctors prescription, outputs a basic prescription stored in the memory of the health management device 100' and the prescription received from the doctor simultaneously.

Fig. 5 is a block diagram showing a health management system according to a second embodiment of the present invention.

As shown in Fig. 5, the health management system according to the second embodiment of the present invention includes a health management device 100", a base station 510, a base station controller 530, a network switch 550 and a database server 570.

The health management device 100" includes the components of the health management device 100 as shown in Fig. 1, and performs the basic function thereof. The health management device 100" further includes a data converting device (not shown) and a wireless data transmitting and receiving device (not shown) and may be connected to the database server by the base station 510, the base station controller 530, and the network switch 570.

The base station 510 is wirelessly connected to the health management device 100" using multi-connection communications techniques such as CDMA and TDMA, or a protocol to wirelessly connect the health management device to the database server.

The base station controller 530 manages communications frequencies between the health management device 100" and the base station 510 for monitoring and controlling the base station.

The database server 570 stores information on the installation, management and repair, connection attestation, fee calculation and other problems in the wireless communications connection with the health management device 100", and transmits prescription data of a doctor to the health management device 100" on the basis of the basic data of a user by

being connected to the health management device 100" via the base station 510. Further, if any new items are generated, the database server 570 transmits the new items via the base station 510 for updating the memory content of the health management device 100".

5 The network switch 550 connects the base station controller 530 to the database server 570.

Fig. 6 is a flow chart for explaining a health management method of the health management system according to the second embodiment of the present invention.

10 As shown in Fig 6, the health management method of the health management system according to the second embodiment of the present invention includes the steps of connecting a base station to the health management device S905, storing data of the health management device to the database server S910, suggesting a doctor's prescription S915, and outputting
15 prescriptions S920.

In the connecting step S905, the health management device 100" is connected to the base station wirelessly by using multi-connection communications techniques such as CDMA or TDMA and protocols.

In the data storing step S910, the analysis and assessment of the basic
20 data and the desired body data of the health management device 100" is stored not only in the memory of the health management device 100" but also in the database server 570 for the inspection of a doctor in charge of the user.

In the prescription suggestion step S915, the doctor suggests a prescription appropriate for the characteristics of the user after inspecting the

user's clinical history, dietary habits and the degree to how much the user reaches the desired body by reviewing the analysis data of the basic data and the assessment data of the desired body data of the database server 570. As the suggested prescription of the doctor is stored in the database server 570, the database server 570 transmits the suggested prescription of the doctor to the health management device 100" by the network switch 550, the base station controller 530 and the base station 510, so that the memory content of the health management device 100" is updated.

In the prescriptions output step S920, the health management device 100" that received the doctor's prescription outputs a basic prescription stored in the memory of the health management device 100" and the received prescription of the doctor simultaneously.

As described hereinabove, the health management system and the health management method according to the present invention may provide a doctor's prescription according to the basic data of the user.

It will be apparent to those skilled in the art that various modifications and variations can be made to the system and method of the present invention without departing from the spirit and scope of the invention. The present invention covers the modifications and variations of this invention provided they come within the scope of the appended claims and their equivalents.

[EFFECT OF THE INVENTION]

As described hereinabove, according to the health management system of the present invention, the prescription of a professional doctor is always available. Further, the health management system is convenient for body weight

control and health management. Therefore, not only obese people but also people with a normal body weight condition may be protected from diseases of adults brought upon them through lack of nutrients, or worse, due to inappropriate dietary habits. Rather, they may be protected with proper dietary habits and body weight control provided by the health management system of the present invention. For example, hypertensive may be protected from overeating salt or cholesterol related diseases, or the hardening of the arteries and diabetes may be protected from various complications because the caloric intake per day and an amount of exercise may be suggested for the sake of the blood sugar level.

WHAT IS CLAIMED IS :

1. A health management device, comprising:

an input part for inputting basic data of a user;

a control part for computing an ideal body weight, a body mass index

5 and a waist / hip circumference ratio on the basis of the basic data, suggesting

a prescription by computing an encouraged caloric intake per day, distribution of
respective nutrients and an encouraged caloric consumption per day, and

suggesting the prescription of the amount among food and time of activities on
the remaining intake calories and respective nutrients and consumption calories

10 by analyzing the calories and respective nutrients already taken in and
consumed by the user by a predetermined time point in a day when the user
inputs desired food or activity contents;

a memory for storing the input content of the input part, and software
and data required for the processing to be performed by the control part; and

15 an output part for outputting the basic data and a result of the
processing performed by the control part.

2. The health management device of claim 1, wherein the basic data
includes personal data including the distinction of sex and date of birth, body
data, current clinical history and habits, the kind and amount of food taken by
20 the user, and content and hour of activities undertaken by the user.

3. The health management device of claim 2, wherein the body data
includes past body data, current body data, desired body data, height, body
weight, waist size, hip size and a routine activity degree as factors for
computing encouraged calories per day.

4. In a health management device including an input part for inputting basic data, a control part for suggesting a prescription on the basis of the basic data, a memory for storing the basic data and software and data required for the process to be performed by the control part, and an output part for outputting a result of the process performed by the control part, a health management method comprising the steps of:

storing the basic data input in the input part by a user;

providing functions selected by the user;

computing total calories taken in a day, in the functions selected by the

10 user;

performing a function for computing total calories consumed by activities in a day on the basis of the basic data, in the functions selected by the user;

performing a function for outputting a current body weight status on the basis of the basic data, in the functions selected by the user;

15 performing a function for assessing a current body weight level with relation to a desired body weight or an ideal body weight respectively set by the user and assessing how much the current body weight reaches the desired body weight or the ideal body weight, in the functions selected by the user;

estimating a body weight of the user after a predetermined time period on the basis of the caloric intake per day and the caloric consumption per day from a predetermined time point in the past to the present, in the functions selected by the user; and

estimating a controllable body weight from the present to a desired period or a period to reach a desired body weight according to whether the user

selects and inputs a desired period or a desired body weight in order to manage the body weight, in the functions selected by the user.

5. The health management method of claim 4, wherein the step of analyzing total calories consumed in a day comprises the steps of:

5 computing total calories consumed in a day on the basis of input activity contents, activity hours, and the current body weight by the control part if the control part is inputted a signal for selecting the function for computing total calories consumed by activities in a day by the user; and

 outputting the computed total calories consumed in a day, remaining
10 encouraged caloric consumption per day and a predictive total caloric consumption in a day by the control part.

6. The health management method of claim 4, wherein the step of outputting a current body weight status on the basis of the basic data comprises the steps of:

15 computing a body mass index and a waist / hip circumference ratio of the user by analyzing the basic data for outputting whether the current body weight of the user is normal or not; and

 assessing a lower body weight, a normal body weight, an overweight and obesity with the current body data, the body mass index, and the waist / hip
20 circumference ratio, and suggesting a prescription.

7. The health management method of claim 4, wherein the step of understanding the desired body weight comprises the steps of setting a desired body data and storing the desired body data to the memory through the input part, and

the step of suggesting a prescription for the desired assessment comprises the steps of:

outputting a prescription for a speed of body weight control, total caloric intake per day, encouragement or limitation of food intake, and encouraged
5 activity names via the control part; and

determining whether a current status of the user is underweight, normal body weight, overweight, or obesity by the control part and suggesting a way for controlling the body weight according to the determination by the control part.

8. The health management method of claim 4, wherein a future body
10 weight simulation step comprises the steps of:

selecting either designation of a desired value or not for estimating a change of body weight;

selecting either an estimation period or an estimation body weight;

determining whether to set a basis for estimating future body data with
15 an estimation period or an estimation body weight;

outputting a body weight estimation value after a predetermined period on the basis of either changes of caloric intake and consumption per day or a change of the body weight from a predetermined time point in the past to the present if the user inputs an estimation period for performing a first simulation
20 step; and

outputting a period to reach an estimation body weight on the basis of either changes of caloric intake and consumption per day or a change of the body weight from a predetermined time point in the past to the present if the user inputs an estimation body weight for performing a second simulation step,

and

the step of selecting either a desired period or a desired body weight comprises the step of:

determining whether to set a basis for estimating a future body data with
5 an estimation period or an estimation body weight;

outputting a controllable body weight from the present in a desired period if the user inputs a desired period for performing a third simulation; and

outputting a period to reach an estimation body weight in the present state, if the user inputs a desired body weight for performing a fourth simulation
10 step.

9. In a health management device including an input part for inputting basic data, a control part for suggesting a prescription on the basis of the basic data, a memory for storing the basic data and software and data required for the process to be performed by the control part, an output part for outputting a
15 result of the process performed by the control part, a data conversion device and a data transmitting and receiving device using at least wire or wireless cable, a health management system comprising:

a network for transmitting data output from the health management device; and

20 a database server for storing the data transmitted via the network and transmitting a prescription of a doctor suggested on the basis of the stored data to the health management device via the network.

10. The health management system of claim 9, wherein the database server has functions for analyzing the basic data, assessing desired body data

on the basis of the basic data, and storing the result of the analysis and the assessment to transfer a prescription of a doctor to the health management device.

11. In a health management device including an input part, a control part,
5 a memory, an output part, a data conversion device and a data transmitting and receiving device, and having functions to analyze basic data and assess desired body data on the basis of the basic data and desired body data of a user for directly suggesting a prescription, to update the memory content according to the content of transmission of a database server, to transmit the
10 analysis data, assessment data and the prescription performed by the health management device to the database server according to the requirement of the user, and to output a prescription of a doctor transmitted via the database server, a health management method comprising the steps of:

connecting the database server to the health management device via a
15 network;

storing the analysis data of the basic data, the assessment data of the desired body data, and the prescription data of the health management device transmitted from the health management device; and

transmitting a prescription of a doctor who inspects the analysis data of
20 the basic data, the assessment data of the desired body data, and the prescription data of the health management device by the database server to the health management device, when suggesting the prescription or updating the memory content of the health management device.

12. The health management method of claim 11, comprising the steps

of:

in the health management device including an input part, a control part, a memory, an output part, a data conversion device and a data transmitting and receiving device for transmitting basic data and desired body data of a user and outputting a prescription of a doctor who reviews the data,

connecting the database server to the health management device via a network;

storing analysis data of the basic data and the desired body data transmitted from the health management device; and

storing analysis and assessment of the basic data and the desired body data in the database server for transmitting prescription data of a doctor who inspects the stored data to the health management device, when suggesting the prescription or updating the memory content of the health management device.

13. In a health management device including an input part for inputting basic data, a control part for analyzing the basic data and assessing the desired body data, a memory for storing the basic data and software and data required for the process to be performed by the control part, an output part for outputting a result of the process performed by the control part, and a data conversion device and a wireless transmitting and receiving device, a health management system comprising:

a base station for connecting to the health management device by using multi-connection communications techniques and protocol to wirelessly connect the health management device to a database server;

a base station controller for managing communications frequencies

between the health management device and the base station for monitoring and controlling the base station;

the database server for storing information on installation, management, repair, and connection attestation in the wireless communications connection
5 with the health management device, and transmitting prescription data of a doctor according to the user's basic data to the health management device by being connected to the health management device via the base station; and

a network switch for connecting the base station controller to the database server.

10 14. A health management system of claim 13, further comprising the functions of analyzing and assessing the basic data and the desired body data on the basis of the basic data of the user and storing the result of the analysis and the assessment, wherein the prescription of a doctor is transmitted to the health management device.

15 15. In a health management device including an input part, a control part, a memory, an output part, a data conversion device and a data transmitting and receiving device, and having functions to analyze basic data and assess desired body data on the basis of the basic data and desired body data of a user for directly suggesting a prescription, to update the memory content
20 according to the content of transmission of a database server, to transmit the analysis data, assessment data and the prescription performed by the health management device to the database server according to the requirements of the user, and to output a prescription of a doctor transmitted via the database server, a health management method comprising the steps of:

wirelessly connecting the base station to the health management device
by using multi-connection communications techniques and protocols;

storing analysis data of the basic data, assessment data of the desired
body data, and prescription data of the health management device transmitted
5 from the health management device to the database server; and

transmitting a prescription of a doctor who inspects the analysis data of
the basic data, the assessment data of the desired body data, and the
prescription data of the health management device to the health management
device via the database server, a network switch, a base station controller and
10 a base station, when suggesting the prescription or updating the memory
content of the health management device.

16. The health management method of claim 15, comprising the steps
of:

in the health management device including an input part, a control part,
15 a memory, an output part, a data conversion device and a data transmitting and
receiving device for transmitting basic data and desired body data of a user and
outputting a prescription of a doctor who reviews the transmitted data,

wirelessly connecting the base station to the health management device
by using multi-connection communications techniques and protocols;

20 storing the transmitted basic data and the desired body data in the
database server; and

performing analysis and assessment of the stored basic data and the
desired body data by the database server, storing the analysis and assessment
results performed by the database server, and transmitting prescription data of

a doctor who inspects the analysis and assessment results of the database server to the health management device via the database server, the network switch, the base station controller and the base station, when suggesting the prescription or updating the memory content of the health management device.